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Munida brucei sp. nov., A New Galatheid (Decapoda, Anomura)
from the East Coast of Africa

With 2 Text-figures

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ABSTRACT A new species of the galatheid Crustacea was taken from the east coast of Kenya, and is here described as *Munida brucei* sp. nov. The new species is allied to *Munida africana* Doflein et Balss, from which it differs in having no transverse row of spines on the second abdominal segment, and in having the cheliped strongly depressed and laterally strongly toothed, with fingers extremely longer than the palm.

Through the courtesy of Dr. A. J. Bruce, I have been able to examine a specimen of anomuran Crustacea belonging to the genus *Munida* of Galatheidæ collected from off the east coast of Kenya. It originates from the collection made by RV "Manihine" of the East African Fisheries Research Organization, Kenya, and was carefully sorted out by Dr. Bruce. Very little is known of the galatheid fauna of the east African coast, only 7 species having been recorded so far as the genus *Munida* is concerned (Doflein & Balss, 1913; Barnard, 1926, 1950; Tirmizi, 1966). On examination the present specimen can neither be referred to the recorded species from East Africa nor identified with any of the Indo-Pacific species.

The species is named after Dr. A. J. Bruce by whom this was first isolated. The type-specimen will be kept in the collection of the British Museum (Natural History).

Munida brucei sp. nov.

(Figs. 1-2)

Material. Off the east coast of Kenya, 02°52.5' S, 40°50.0' E, 65 fathoms, bottom sand and rock, Dec. 8, 1971, N. Bruce Coll. — 1 ♂ (holotype, BM, reg. no. 1973: 203).

Description of holotype. The rostrum is slender and spiniform, about half the length of the remaining carapace. It is gently curved inwards and ends in a sharp

point. The dorsal surface is minutely scaly or tuberculate, and the lateral border is furnished with 6 or 7 minute processes on the distal half. Along the lateral border the rostrum bears a dorsal ridge on each side excepting the distal fourth. The supraorbital spine is short and directed more upwards than the rostrum, measuring $1/4$ of the rostrum length. A distance between the supraorbitals is very narrow, measuring less than $1/6$ of the carapace breadth. The rostral sulcus (Zariquiey, 1952, fig. 1, a) is deep.

The carapace is moderately strigose dorsally, having only three complete transverse ridges restricted to the posterior portion; the remaining ridges are all incomplete. Exclusive of the rostrum the carapace is 1.2 times as long as broad. The cervical groove is distinct. Transversely the gastric row of four spines are present; the inner two are the larger and situated just behind the supraorbitals; outside of these two pairs a small spine is present on each side. Behind the gastric spines are scaly striae. About 9 minute spines are distributed on the hepatic area. The postcervical spine is present. The anterior branchial region has three or four small spines. The cardiac and postbranchial regions are unarmed, only provided with 11 striae, of which 9 are incomplete. A distinct supra-antennal spine is present. Between the supraorbital and supra-antennal spines fine setae are thickly placed. The anterolateral spine is distinct. The anterior branchial region has three marginal spines. The lower outer extremity of the orbit is protected with a short but sharp spine. Below the eye or above the antennular basal segment is a large and sharp spine which is directed outwards.

The abdominal segments are comparatively smooth, each with two transverse grooves having the postedge fringed with short setae.

Sternal segments have rather smooth surface. The maxilliped sternum is laterally expanded with round lateral margin, the anterior margin being minutely dentate. The following sternite has the surface with a single broken transverse ridge anteriorly and one pair of feebly developed short striae medially.

The eye is well swollen distally, with short fringing setae between the cornea and the stalk.

The antennular basal segment is prolonged, distally having two undeveloped spines of equal size both at the outer and at the inner margins. The outer margin has two spines at the middle; the distal is prolonged, extending beyond the antennular basal segment itself, and the proximal is small and short.

The antennal peduncle is stout; the basal segment has a short spine on the inner distal margin; the second (basal second) bears a strong spine both on the inner and on the outer distal margins, the inner of which is the larger; the third is similarly furnished with both marginal spines of small size.

The ischium of the third maxilliped is triangular in cross section, and bears a well developed cutting edge with about 23 closely placed denticles; the inner distal margin is produced to form a sharp and stout spine. The considerably setose merus is as long as the preceding segment; the inner margin has two spines, of which

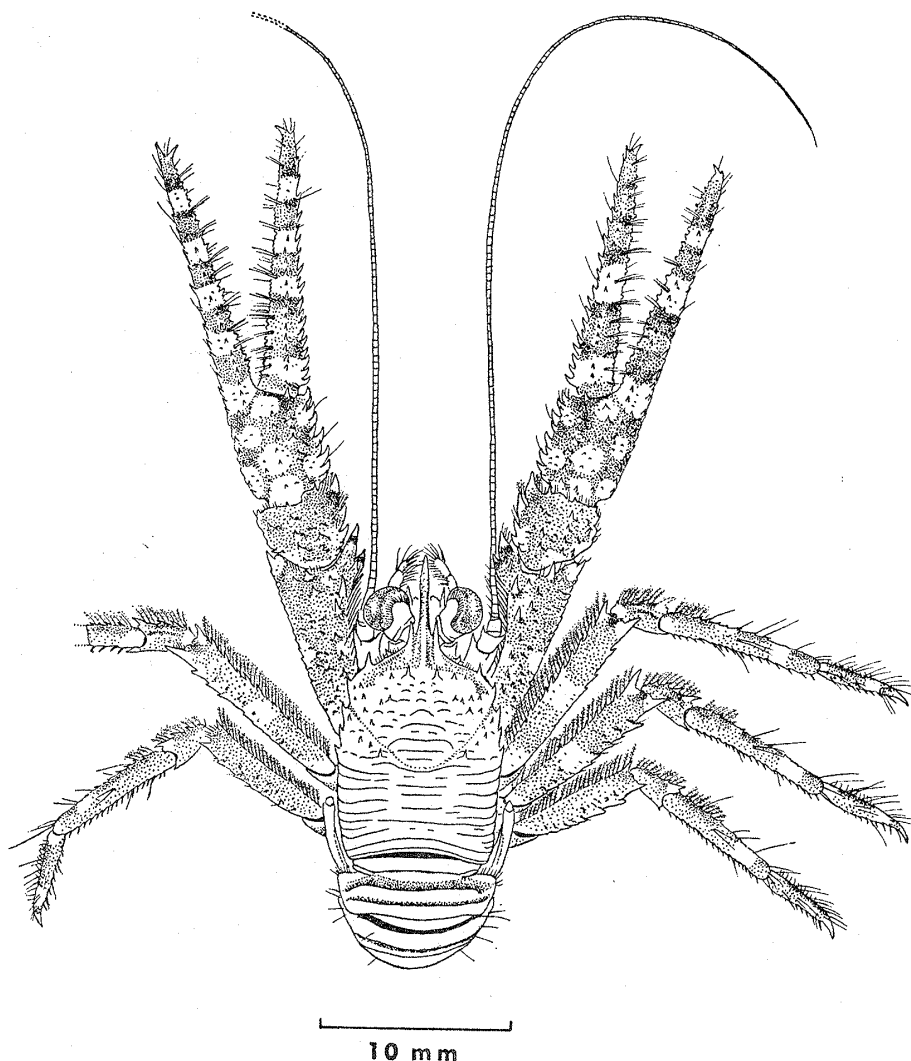


Fig. 1. *Munida brucei* sp. nov., holotype, male, dorsal view.

the one placed distally is small and the other is of large size and situated on the middle.

The cheliped is stout, depressed and exceeds beyond the tip of the rostrum by 1.5 times the length of the carapace; the dorsal surface is flattened but the ventral somewhat convex. The fingers are slightly less than the carapace length and 2.5 times the length of the palm. On the straight cutting edges of both movable and immovable fingers are each a row of denticles, about 48 on that of the movable and 40 on that of the immovable finger. The tips of both fingers are curved inwards and each ends in a sharp point. The chela bears stout teeth on the whole length of the anterior margin, i.e. about 20 on that of the movable finger and 10 on the palm. Posteriorly about 20 minute marginal teeth are lined up on the whole length of the chela, the foremost is placed outside of the terminal tip of the finger.

Dorsally each finger is armed with a row of minute teeth numbering 16–17; likewise the palm has three longitudinal rows of dorsal spines of small size. The chela is almost non-setose, only excepting bundles of setae placed along the cutting edge, which are directed inwards. The wrist is shorter than the palm; four inner marginal spines are stout and flat, proximally becoming smaller; the dorsal surface is non-setose, and also scattered with small spines. The arm has the inner margin with plumose setae thickly; three stout and flattened spines are present on the inner distal marginal portion, and 7–8 spines follow behind them; the dorsal surface is non-setose but slightly scaly. Ventrally all segments are tuberculous or scaly and only additional small number of spines are scattered near the inner margin.

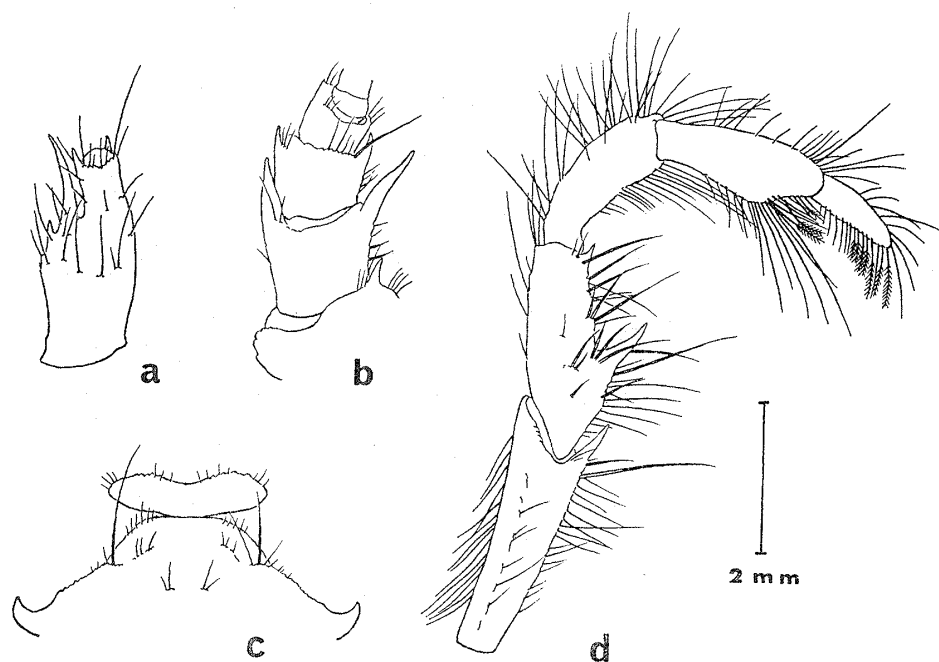


Fig. 2. *Munida brucei* sp. nov., holotype; a, basal segment of right antennule, ventral view; b, right antennal peduncle, ventral view; c, anterior part of sternal segments; d, right third maxilliped.

Walking legs are slender and depressed. The merus of the first leg is four times as long as the carpus, dorsally slightly scaly and furnished with soft plumose setae on the anterior margin; about 9 distinct spines are present on the anterior margin and 4 minute spines are slightly dorsal in position at the proximal portion: three spines are distinct on the posterior margin of the distal portion, and several spiniform elevations are also followed. The carpus is smooth dorsally; both the anterior and the posterior terminal margins protrude to form a stout spine each; anteriorly the margin has 4 distinct spines and thickly placed plumose setae. The propodus is 11 times as long as broad, dorsally almost smooth; the anterior margin has plumose setae only on the proximal portion and 9 small spines on the proximal

third; ventrally lined up are 17 spines which are mobile, the distal of them forms a pair with another ventral one. The dactylus measures $\frac{2}{3}$ of the preceding segment; it is setose, slightly curving inwards and ends in a sharp point. On the anterior border are distinct short plumose setae; also lined up on the posterior margin are about 11 mobile spines which become smaller proximally, each spine springing from the base of the weakly serrated teeth. The second leg is very similar to the first only excepting that the merus is slightly broader than that of the first. The third leg is shorter than the first two legs; the merus has the anterior margin with only 4 spines and the posterior margin with three distinct spines and several indistinct spiniform elevations; other portions are similar to those of the anterior two legs, although the number of spines armed are slightly variable.

Epipods are absent from all the pereopods.

First and second pleopods are present.

Colour. A colour photograph made by Dr. Bruce was kindly offered at my disposal. The ground colour of the body is reddish brown and is ornamented with purplish transverse lines running along the posteriormost ridge on the carapace and posterior margins of second to fourth abdominal segments. Pale spots and bands are seen on the chelipeds and walking legs as shown in Fig. 1.

Measurements (in mm).

Length of carapace including rostrum		15.5
Breadth of carapace		8.5
Length of cheliped	26.2 (L)	25.5 (R)
Length of wrist	3.9	4.0
Length of palm	5.7	5.8
Breadth of palm	4.1	4.0
Length of movable finger	14.4	13.5

Remarks. Recently Tirmizi (1966) reported six species of this genus from the east African coast, Zanzibar, which material comes from a collection of the John Murray Expedition, as listed below: *Munida elegantissima* de Man, *M. japonica* Stimpson, *M. andamanica* Alcock, *M. vigiliarum* Alcock, *M. tricarinata* Henderson, and *M. incerta* Henderson. Prior to this the only knowledge to the galatheid fauna of the coast concerned is contributed by Doflein and Balss (1913) who described *M. africana* from off the coast of Kenya, and by Barnard (1926, 1950) who recorded *M. incerta* from off Mosambique. Of these known species *M. africana* is most closely related to the present new species. In general appearance of the carapace, however, the new species differs from it in having no transverse row of spines on the second abdominal segment and in having the cheliped strongly depressed and laterally strongly toothed, its fingers being extremely longer than the palm. Such a prolonged fingers are seen only in the east Atlantic *Munida curvimana* Milne Edwards et Bouvier and the Indopacific *M. elegantissima* de Man, both of which, however, bear the cheliped of cylindrical form. Similarly the propodus of the walking leg has the lower (posterior) margin with about 17 minute mobile spines,

very characteristic of this species, which number is much larger than those of the other known species.

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